

# List of All Chemicals

## P Armoracia rusticana (Brassicaceae)

### Common name(s)

Horseradish

### How used

Food

\*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Chemical	Part	Low PPM	High PPM	StdDev	*Reference
2-BUTYL-ISOTHIOCYANATE	Seed	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3-(METHYLTHIO)-PROPYL-ISOTHIOCYANATE	Root	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
3-BENZYLISOTHIOCYANATE	Root	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
3-BUTENYL-ISOTHIOCYANATE	Root	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
<b>Activities (1)</b>					
Antimutagenic		Economic & Medicinal Plant Research, 6: 235.			
3-O-(2-O-(BETA-D-XYLOPYRANOSYL)-BETA-D-GALACTOPYRANOSYL)-FLAVONE	Leaf	6.0	20.0	*	
3-O-(2-O-(BETA-D-XYLOPYRANOSYL)-BETA-D-GALACTOPYRANOSYL)-QUERCETIN	Leaf	1.0	4.0	*	
3-O-(BETA-D-GALACTOPYRANOSYL)-KAEMPFEROL	Leaf	--	--	*	
3-O-(BETA-D-GALACTOPYRANOSYL)-QUERCETIN	Leaf	--	--	*	
3-O-BETA-D-GLUCOSYL-BETA-D-KAEMPFEROL-XYLOSE	Leaf	--	--		Abstract (See species file)
3-O-BETA-D-GLUCOSYL-BETA-D-QUERCETIN-XYLOSE	Leaf	--	--		Abstract (See species file)
3-O-BETA-D-KAEMPFEROL-GLUCOSIDE	Leaf	--	--		Abstract (See species file)
3-O-BETA-D-QUERCETIN-GLUCOSIDE	Leaf	--	--		Abstract (See species file)
4-PENTENYL-ISOTHIOCYANATE	Root	--	--		Wealth of India.
<b>Activities (1)</b>					
Antimutagenic		Economic & Medicinal Plant Research, 6: 235.			
AESCULETIN	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.

## Activities (32)

5-Lipoxygenase-Inhibitor IC50=0.1-5 $\mu$ M	
Aldose-Reductase-Inhibitor IC50=0.74 ug/ml cow	Okada,Y,et al.1995.Search for Naturally Occurring Substances to Prevent the Complications of Diabetes.II.Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation.Chem Pharm Bull43(8):1385-1387
Analgesic	
Antiarrhythmic	
Antiasthmatic?	
Antibacterial	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Anticapillary-Fragility	Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
Antidysenteric	HerbalGram No. 24, page 37.
Antiescherichic	
Antiinflammatory IC50=0.1-5 $\mu$ M	
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antipyretic	
Antiseptic	
Antistaphylococcic	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Cardiodepressant	
Choleretic	Fitoterapia No.5-1986.
Cosmetic	
Cytotoxic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingston, Edinburgh.
Dermatitogenic	Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
Fungicide	
Hepatoprotective 6 mg/kg mus	
Hypertensive	Chemical Constituents of Oriental Herbs (3 diff. books)
Lipoxygenase-Inhibitor	
Musculotropic	Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
Myorelaxant	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Pesticide	
Prostaglandin-Synthesis-Inhibitor 100 $\mu$ M rbt	Hung, H.C., Lai, M.W., Wang, H.R., Chung, Y.L., Hsieh, L.M., Chen, C.C. 1993. Antiproliferative Effect of Esculetin on Vascular Smooth Muscle Cells: Possible Roles of Signal Transduction Pathways. Eur J Pharmacol, 237(1): 39-44.
Sunscreen IC98=20 mg/l	Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. Fitoterapia 64(2): 134-136, 1993.
Sunscreen IC100=50 mg/l	Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. Fitoterapia 64(2): 134-136, 1993.
UV-Screen	Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
Xanthine-Oxidase-Inhibitor IC52=10 $\mu$ M	

## ALLOXURBASEN

Root -- -- List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

## ALLYL-ISOTHIOCYANATE

Root 400.0 2592.0 \*

## Activities (16)

Allergenic	
Antiasthmatic	
Antifeedant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antiseptic	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Counterirritant	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Decongestant	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Embryotoxic	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Fungicide MIC=1.8-3.5 ug/ml	
Herbicide IC100=0.4 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.
Insectiphile	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Mutagenic	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Nematicovistat 50 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Pesticide	
Spice FEMA 1-80 ppm	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

**Activities (7)**

Acantholytic	My Rodale Press Green Farmacy Draft, miscellaneous abstracts.
Allergenic	
Antiaggregant	LAWSON in Koch, H. P., and Lawson, L. D., eds. 1996. Garlic- The Science and therapeutic application of Allium sativum L. and related species. Williams & Wilkins, Baltimore. 329 pp.
Antibacterial	Pakistan Encyclopedia Planta Medica. 1986.
Pemphigenic	My Rodale Press Green Farmacy Draft, miscellaneous abstracts.
Pesticide	
Respiradepressant ivn	Pakistan Encyclopedia Planta Medica. 1986.

**ALUMINUM**

Root 4.0 30.0 -0.3 ACTA AGRIC SCAND SUPPL 22: 1980

**Activities (5)**

Antisilicotic	Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987.
Antivaginitic	Martindale's 28th
Candidicide	Martindale's 28th
Encephalopathic	Martindale's 29th
Pesticide	

**AMYLASE**

Root -- -- List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

**Activities (1)**

Sedative

**ARGININE**

Root -- -- List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

**Activities (14)**

Antidiabetic?	Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
Antiencephalopathic	Martindale's 29th
Antihepatitic	Martindale's 29th
Antihypertensive	
Antiimpotence	
Antiinfertility 4 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antioxidant?	
Aphrodisiac 3 g/day	
Diuretic	
Hypoammonemic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
NO-Genic	
Pituitary-Stimulant	
Spermigenic 4 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Vasodilator	

**ARSENIC**

Root 0.01 0.04 -0.21 ACTA AGRIC SCAND SUPPL 22: 1980

**Activities (2)**

Anorexic	Forest H. Nielsen, USDA, Grand Forks, various publications.
Pesticide	

**ASCORBIC-ACID**

Root 1800.0 10000.0 5.07 \*

**Activities (112)**

Acidulant FEMA 6,000	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Aldose-Reductase-Inhibitor	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Analgesic 5-10 g/day	
Angiotensin-Receptor-Blocker	
AntiAGE 2,000 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
AntiCFS 500-1,000 mg	
AntiCTS 1,000 mg 3x/day	
AntiCrohn's 50-100 mg/day/orl/man	Martindale's 29th

AntiLyme	500-2,000 mg	
AntiRaynaud's	500 mg 1-2x/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Antiaggregant		
Antiaging	400 mg/day	
Antiallergic		
Antialzheimeran	2,000-6,000 mg/day	
Antiarthritic	0.2-1 g/day	
Antiasthmatic	1,000 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiatherosclerotic		
Antibacterial		Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Anticataract	350 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Anticataract	400 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Anticataract	1 g 3x/day	
Anticervicaldysplastic	1,000-2,000 mg/day	
Anticlimacteric	500-5,000 mg/day	
Anticold	1-2 g/man/day	
Antidecubitic	500 mg/man/2x/day	Martindale's 28th
Antidementia		
Antidepressant	2,000 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antidiabetic		Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Antidote (Aluminum)		Economic & Medicinal Plant Research, 6: 189.
Antidote (Cadmium)		Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidote (Lead)		Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidote (Paraquat)		Martindale's 28th
Antieczemic	3.5-5 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiedemic	1 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiencephalitic		Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiendometriotic	2,000 mg/day	
Antifatigue	500-1,000 mg	
Antifibrotic	1,000-2,000 mg	
Antigallstone	1,000-3,000 mg/day	
Antigastritic		
Antigingivitic		
Antiglaucomic	2 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antihangover	1,000 mg	
Antihemorrhagic	1 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihepatitic	2-6 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihepatotoxic		Economic & Medicinal Plant Research, 6: 189.
Antiherpetic	1-5 g/day	
Antihistaminic	2 g/day orl man	
Antihypertensive		
Antiinfertility	1 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiinflammatory		Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antilepric	1.5 g/man/day	Martindale's 28th
Antilithic	1,000-3,000 mg/day	
Antimaculitic		
Antimeasles		Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antimenopausal	500-5,000 mg/day	
Antimigraine		Martindale's 29th
Antimutagenic		Economic & Medicinal Plant Research, 6: 235.
Antineuramidase		
Antinitrosic	1 g/man/day	Martindale's 28th
Antiobesity	1 g 3x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiorchitic		Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiosteoarthritic	1 g 2x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiosteoporotic	500 mg/day	
Antioxidant	100 ppm	
Antiparkinsonian	1 g 2-3x/day	
Antiparotitic		Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiperiodontitic	1 g 2x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antipneumonic		Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).

Antipodriac	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antipoliomyelic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antipyretic	Economic & Medicinal Plant Research, 6: 189.
Antiradicular	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antiretinotic	
Antirheumatic	
Antirhinitic 1,000 mg 3x/day	
Antiscorbutic 10 mg/man/day	Martindale's 28th
Antiseptic MIC=3.3-217 mg/ml	Martindale's 28th
Antiseptic 4-8 g/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antishingles	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antispasmodic 500-5,000 mg/day	
Antistress 500-1,000 mg	
Antisyndrome-X 1-4 g/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antitumor (Gastric)	
Antitumor (Lung)	
Antiulcer	
Antiviral 1-5 g/day	
Apoptotic 1-10 mM	
Asthma-preventive 1,000 mg/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Beta-Adrenergic Receptor Blocker	
Beta-Glucuronidase-Inhibitor 1.5 g/day/man	
Calcium-Antagonist	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Cardioprotective	
Cold-preventive 1-2 g/day	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Collagenic	
Detoxicant	
Diuretic 700 mg/man/orl	
Fistula-Preventive	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Hypocholesterolemic 300-1,000 mg/day	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Hypoglycemic	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Hypotensive 1,000 mg/man/day	
Immunomodulator	
Immunostimulant	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Interferonogenic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Lithogenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Mucolytic 1 g/woman/day	Martindale's 28th
Pesticide	
Uricosuric 4 g/man/day	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Urinary-Acidulant	Martindale's 29th
Vasodilator	
Vulnerary	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

ASCORBIC-ACID	Plant	1220.0	18200.0	3.68	*
<b>Activities (112)</b>					
Acidulant FEMA 6,000					
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Analgesic 5-10 g/day					
Angiotensin-Receptor-Blocker					
AntiAGE 2,000 mg/day					
AntiCFS 500-1,000 mg					
AntiCTS 1,000 mg 3x/day					
AntiCrohn's 50-100 mg/day/orl/man	Martindale's 29th				
AntiLyme 500-2,000 mg					
AntiRaynaud's 500 mg 1-2x/day					
Antiaggregant					

Antiaging 400 mg/day	
Antiallergic	
Antialzheimeran 2,000-6,000 mg/day	
Antiarthritic 0.2-1 g/day	
Antiasthmatic 1,000 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiatherosclerotic	
Antibacterial	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Anticataract 350 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Anticataract 400 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Anticataract 1 g 3x/day	
Anticervicaldysplastic 1,000-2,000 mg/day	
Anticlimacteric 500-5,000 mg/day	
Anticold 1-2 g/man/day	
Antidecubitic 500 mg/man/2x/day	Martindale's 28th
Antidementia	
Antidepressant 2,000 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
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Antiendometriotic 2,000 mg/day	
Antifatigue 500-1,000 mg	
Antifibrotic 1,000-2,000 mg	
Antigallstone 1,000-3,000 mg/day	
Antigastritic	
Antigingivitic	
Antiglaucomic 2 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antihangover 1,000 mg	
Antihemorrhagic 1 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihepatitic 2-6 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihepatotoxic	Economic & Medicinal Plant Research, 6: 189.
Antiherpetic 1-5 g/day	
Antihistaminic 2 g/day or 1 man	
Antihypertensive	
Antiinfertility 1 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiinflammatory	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antilepric 1.5 g/man/day	Martindale's 28th
Antilithic 1,000-3,000 mg/day	
Antimaculitic	
Antimeasles	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antimenopausal 500-5,000 mg/day	
Antimigraine	Martindale's 29th
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antineuramidase	
Antinitrosic 1 g/man/day	Martindale's 28th
Antiobesity 1 g 3x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiorchitic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiosteoarthritic 1 g 2x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiosteoporotic 500 mg/day	
Antioxidant 100 ppm	
Antiparkinsonian 1 g 2-3x/day	
Antiparotitic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
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Antipyretic	Economic & Medicinal Plant Research, 6: 189.

Antiradicular	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antiretinotic	
Antirheumatic	
Antirhinitic 1,000 mg 3x/day	
Antiscorbutic 10 mg/man/day	Martindale's 28th
Antiseptic MIC=3.3-217 mg/ml	Martindale's 28th
Antiseptic 4-8 g/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antishingles	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antispasmodic 500-5,000 mg/day	
Antistress 500-1,000 mg	
Antisyndrome-X 1-4 g/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antitumor (Gastric)	
Antitumor (Lung)	
Antiulcer	
Antiviral 1-5 g/day	
Apoptotic 1-10 mM	
Asthma-preventive 1,000 mg/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Beta-Adrenergic Receptor Blocker	
Beta-Glucuronidase-Inhibitor 1.5 g/day/man	
Calcium-Antagonist	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Cardioprotective	
Cold-preventive 1-2 g/day	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Collagenic	
Detoxicant	
Diuretic 700 mg/man/orl	
Fistula-Preventive	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Hypocholesterolemic 300-1,000 mg/day	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Hypoglycemic	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Hypotensive 1,000 mg/man/day	
Immunomodulator	
Immunostimulant	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Interferonogenic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Lithogenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Mucolytic 1 g/woman/day	Martindale's 28th
Pesticide	
Uricosuric 4 g/man/day	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Urinary-Acidulant	Martindale's 29th
Vasodilator	
Vulnerary	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

ASCORBIC-ACID	Leaf	2440.0	4560.0	-0.02	*
<b>Activities (112)</b>					
Acidulant FEMA 6,000	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Aldose-Reductase-Inhibitor	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95				
Analgesic 5-10 g/day					
Angiotensin-Receptor-Blocker					
AntiAGE 2,000 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95				
AntiCFS 500-1,000 mg					
AntiCTS 1,000 mg 3x/day					
AntiCrohn's 50-100 mg/day/orl/man	Martindale's 29th				
AntiLyme 500-2,000 mg					
AntiRaynaud's 500 mg 1-2x/day					
Antiaggregant	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95				
Antiaging 400 mg/day					
Antiallergic					
Antialzheimeran 2,000-6,000 mg/day					

Antiarthritic 0.2-1 g/day	
Antiasthmatic 1,000 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antitherosclerotic	
Antibacterial	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Anticataract 350 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Anticataract 400 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Anticataract 1 g 3x/day	
Anticervicaldysplastic 1,000-2,000 mg/day	
Anticlimacteric 500-5,000 mg/day	
Anticold 1-2 g/man/day	
Antidecubitic 500 mg/man/2x/day	Martindale's 28th
Antidementia	
Antidepressant 2,000 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antidiabetic	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Antidote (Aluminum)	Economic & Medicinal Plant Research, 6: 189.
Antidote (Cadmium)	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidote (Lead)	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidote (Paraquat)	Martindale's 28th
Antieczemic 3.5-5 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiedemic 1 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiencephalitic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiendometriotic 2,000 mg/day	
Antifatigue 500-1,000 mg	
Antifibrotic 1,000-2,000 mg	
Antigallstone 1,000-3,000 mg/day	
Antigastritic	
Antigingivitic	
Antiglaucomic 2 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antihangover 1,000 mg	
Antihemorrhagic 1 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihepatitic 2-6 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihepatotoxic	Economic & Medicinal Plant Research, 6: 189.
Antiherpetic 1-5 g/day	
Antihistaminic 2 g/day orl man	
Antihypertensive	
Antiinfertility 1 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiinflammatory	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antilepric 1.5 g/man/day	Martindale's 28th
Antilithic 1,000-3,000 mg/day	
Antimaculitic	
Antimeasles	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antimenopausal 500-5,000 mg/day	
Antimigraine	Martindale's 29th
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antineuramidase	
Antinitrosic 1 g/man/day	Martindale's 28th
Antiobesity 1 g 3x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiorchitic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiostearthritic 1 g 2x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiosteoporotic 500 mg/day	
Antioxidant 100 ppm	
Antiparkinsonian 1 g 2-3x/day	
Antiparotitic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiperiodontic 1 g 2x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antipneumonic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antipodriac	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antipoliomyelitic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antipyretic	Economic & Medicinal Plant Research, 6: 189.
Antiradicular	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Antiretinotic	
Antirheumatic	
Antirhinitic 1,000 mg 3x/day	

Antiscorbutic 10 mg/man/day	Martindale's 28th
Antiseptic MIC=3.3-217 mg/ml	Martindale's 28th
Antiseptic 4-8 g/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance.</i> John Wiley & Sons, New York. 272 pp. \$24.95
Antishingles	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine.</i> Avon Books, New York. 509pp.
Antispasmodic 500-5,000 mg/day	
Antistress 500-1,000 mg	
Antisyndrome-X 1-4 g/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance.</i> John Wiley & Sons, New York. 272 pp. \$24.95
Antitumor (Gastric)	
Antitumor (Lung)	
Antiulcer	
Antiviral 1-5 g/day	
Apoptotic 1-10 mM	
Asthma-preventive 1,000 mg/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf).
Beta-Adrenergic Receptor Blocker	
Beta-Glucuronidase-Inhibitor 1.5 g/day/man	
Calcium-Antagonist	
Cancer-Preventive	Stitt, P. A. <i>Why George Should Eat Broccoli.</i> Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Cardioprotective	
Cold-preventive 1-2 g/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine.</i> Avon Books, New York. 509pp.
Collagenic	
Detoxicant	
Diuretic 700 mg/man/orl	
Fistula-Preventive	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf).
Hypocholesterolemic 300-1,000 mg/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine.</i> Avon Books, New York. 509pp.
Hypoglycemic	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance.</i> John Wiley & Sons, New York. 272 pp. \$24.95
Hypotensive 1,000 mg/man/day	
Immunomodulator	
Immunostimulant	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance.</i> John Wiley & Sons, New York. 272 pp. \$24.95
Interferonogenic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf).
Lithogenic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine.</i> Avon Books, New York. 509pp.
Mucolytic 1 g/woman/day	Martindale's 28th
Pesticide	
Uricosuric 4 g/man/day	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine.</i> Avon Books, New York. 509pp.
Urinary-Acidulant	Martindale's 29th
Vasodilator	
Vulnerary	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine.</i> John Bastyr College Publications, Seattle, Washington (Looseleaf).

ASH	Root	10620.0	59000.0	-0.24	*
ASH	Plant	--	200000.0	1.43	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
ASPARAGINE	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

#### Activities (2)

Antisickling Ekeke, G.I. and Shode, F.O. 1988. Phenylalanine is the Predominant Antisickling Agent in *Cajanus cajan* Seed Extract. *Planta Medica* 56(1): 41, 1990.  
 Diuretic HerbalGram No. 17.

BETA-CAROTENE	Root	27.0	150.0	0.52	*
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**Activities (53)**

Allergenic	
Androgenic?	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
AntiPMS	
Antiacne	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiaging	
Antiarthritic	
Antiasthmatic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticancer	Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.
Anticarcinomic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticervicaldysplastic	
Anticorony 50 mg/man/2 days	
Antihyperkeratotic	
Antiichthyotic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antileukoplakic	
Antilipoperoxidant IC71=50 ug/ml	
Antilupus 150 mg/man/day/2 mos	Martindale's 28th
Antimaculitic	
Antimastitic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antioxidant	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiozenic	
Antipapillomic	
Antiphotophobic 30-300 mg/man/day	Martindale's 29th
Antipityriasic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiporphyrinic 30-300 mg/man/day	Martindale's 28th
Antiproliferant	Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.
Antipsoriac	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiradicular	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antirheumatic	
Antistress	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antitumor	Simon, P.W. Carrots and Other Horticultural Crops as a Source of Provitamin A Carotenes. HortScience, 25(12): 1495, 1990.
Antitumor (Breast) IC45=60 ug/ml	
Antitumor (CNS) IC43=45 ug/ml	
Antitumor (Colon) IC43=45 ug/ml	
Antitumor (Lung) IC30=60 ug/ml	
Antitumor (Prostate)	
Antitumor (Stomach) IC26=45 ug/ml	
Antiulcer 12 mg 3x/day/man/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiulcer 15,000-25,000 IU/day	
Antixerophthalmic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
COX-1-Inhibitor IC78=50 ug/ml	
COX-2-Inhibitor IC82=50 ug/ml	
Cancer-Preventive 22 ppm	Jim Duke's personal files.
Chemopreventive	
Colorant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Gastroprotective	
Immunostimulant 180 mg/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Interferon-Synergist	
Mucogenic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Phagocytotic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Prooxidant 20 ug/g	
Thymoprotective	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Ubiquiot	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

**BETA-SITOSTEROL**

Root --

710.0

-0.26

Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)

## Activities (47)

Androgenic					
Angiogenic					
Anorexic	Martindale's 28th				
Antiadenomic	Merck 11th Edition				
Antiandrogenic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.				
Antibacterial	Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155.				
Anticancer (Breast)	Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103.				
Anticancer (Cervix)					
Anticancer (Lung)					
Antiedemic IC54=320 mg/kg orl					
Antiestrogenic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.				
Antifeedant	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.				
Antifertility	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.				
Antigonadotrophic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.				
Antihyperlipoproteinemia	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antiinflammatory					
Antileukemic					
Antilymphomeric					
Antimutagenic 250 ug/ml					
Antiphidic 2.3 mg mus	Economic & Medicinal Plant Research, 5: 363.				
Antioxidant IC44=10 uM					
Antiprogestational	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.				
Antiprostaglandin 30 mg/day/12 wks					
Antiprostatadenomic	Merck 11th Edition				
Antiprostatic 10-20 mg 3 x/day/orl man					
Antipyretic	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.				
Antitumor (Breast)	Madhavi, D. L., Bomser, J., Smith, M., Singletary, K. 1998. Isolation of Bioactive Constituents from Vaccinium myrtillus (Bilberry) Fruits and Cell Cultures. Plant Sci., 131(1): 95-103.				
Antitumor (Cervix)					
Antitumor (Lung)					
Antiviral	Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in Artemisia annua. Plant Science, 75: 161-165, 1991.				
Apoptotic					
Artemicide LC50=110 ppm	Jung, J.H., Pummangura, S., Chaichantipyuth, C., Patarapanich, C., and McLaughlin, J.L. 1989. Bioactive Constituents of Melodorum fruticosum. Phytochemistry. 29(5): 1667-1670. 1990.				
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				
Candidicide	Recently became Internat. J. Crude Drug Res. 28(1,2,3,4):1990, page 155.				
Caspase-8-Inducer					
Estrogenic					
Febrifuge	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.				
Gonadotrophic	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.				
Hepatoprotective					
Hypocholesterolemic 2-6 g/man/day/orl	Martindale's 30th				
Hypocholesterolemic 9-3,330 mg/man/day/orl	Martindale's 28th				
Hypoglycemic	Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. Journal of Ethnopharmacology, 27: 243-275, 1989.				
Hypolipidemic 2-6 g/day					
Pesticide					
Spermicide	Malini, T. and Vanithakumari, G. 1989. Rat Toxicity Studies With B-Sitosterol. Journal of Ethnopharmacology, 28: 221-234, 1990.				
Ubiquiot	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Ulcerogenic 500 mg/kg ipr rat					

## BIOSIDE

Leaf -- -- Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

## BORON

Root 6.0 27.0 0.11 ACTA AGRIC SCAND SUPPL 22: 1980

## Activities (4)

Androgenic 3 mg/man/day					
Antiosteоarthritic					
Antiosteoporotic 3 mg/man/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.				
Estrogenic 3 mg/man/day					

## BROMINE

Root 5.0 19.0 1.32 ACTA AGRIC SCAND SUPPL 22: 1980

BUTYLISOTHIOCYANATE	Plant	188.0	2867.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
CADMIUM	Root	0.08	0.5	-0.36	ACTA AGRIC SCAND SUPPL 22: 1980
<b>Activities (3)</b>					
Hypertensive	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Lithogenic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Nephrotoxic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).				
CAFFEIC-ACID	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.
<b>Activities (102)</b>					
Aldose-Reductase-Inhibitor 4 ug/ml (weak activity)	Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. <i>Sankyo Kenkyusho Nempo</i> , 43: 99-110.				
Allergenic					
Analgesic					
AntiHIV EC50=200 ug/ml					
AntiLegionella					
Antiadenoviral	Economic & Medicinal Plant Research, 5: 207.				
Antiaggregant	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.				
Antiaging					
Antiatherogenic					
Antibacterial					
Anticancer					
Anticarcinogenic	Economic & Medicinal Plant Research, 6: 189.				
Antidepressant					
Antiedemic	Economic & Medicinal Plant Research, 6: 189.				
Antielastase IC50=93 um/l					
Antielastase IC50=86 ug/ml (475 uM)					
Antiescherichic					
Antiflu	Economic & Medicinal Plant Research, 5: 207.				
Antigonadotropic	Jim Duke's personal files.				
Antihemolytic 25 uM	Ohnishi, M., Morishita, H., Iwahashi, H., Toda, S., Shirataki, Y., Kimura, M., and Kido, R. 1993. Inhibitory Effects of Chlorogenic Acids on Linoleic Acid Peroxidation and Haemolysis. <i>Phytochemistry</i> . 36(3): 579-583. 1994.				
Antihepatoadenomic 200 ppm diet orl mus					
Antihepatotoxic					
Antiperitic 50 ug/ml					
Antiperitic EC50=>50 ug/ml					
Antihistaminic					
Antihypercholesterolemic	Economic & Medicinal Plant Research, 6: 189.				
Antihyperthyroid					
Antiinflammatory					
Antileukemic	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.				
Antileukotriene					
Antimelanogenic					
Antimutagenic	Ki Soon Rhee. Oilseed Food Ingredients Used To Minimize Oxidative Flavor Deterioration in Meat Products. Phenolic Compounds in Food and Their Effects on Health, Ch.18.				
Antinitrosaminic	Ki Soon Rhee. Oilseed Food Ingredients Used To Minimize Oxidative Flavor Deterioration in Meat Products. Phenolic Compounds in Food and Their Effects on Health, Ch.18.				
Antiphidic					
Antioxidant 50 uM					
Antioxidant IC57=30 ppm					
Antioxidant 1/3 quercetin					
Antioxidant 30 mM					
Antioxidant 1.3 x Vit. E					
Antioxidant 1/2 BHA					
Antiperoxidant IC50=44 uM	Planta Medica, 57: A54, 1991.				
Antiperoxidant IC35=200 ug/ml					
Antiperoxidant IC85=100 ug/ml					
Antiproliferant	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.				
Antiprostaglandin					
Antiradicular 10 uM	Ohnishi, M., Morishita, H., Iwahashi, H., Toda, S., Shirataki, Y., Kimura, M., and Kido, R. 1993. Inhibitory Effects of Chlorogenic Acids on Linoleic Acid Peroxidation and Haemolysis. <i>Phytochemistry</i> . 36(3): 579-583. 1994.				
Antiradicular 1/3 quercetin					
Antiradicular 30 mM					

Antiradicular IC50=32-35 uM	
Antiseptic	
Antispasmodic EC50=3.4-15 uM	Phytotherapy Research, 4: 73.
Antistaphylococcal	
Antistomatisitic	Economic & Medicinal Plant Research, 5: 207.
Antisunburn	
Antithiamin	Phenolic Compounds in Food and Their Effects on Health, 69.
Antithyroid	Jim Duke's personal files.
Antitumor 200 ppm diet orl mus	
Antitumor (Skin)	
Antitumor-Promoter IC42=10 uM	Cancer Research, 48: 5941.
Antiulcerogenic	
Antivaccinia	Economic & Medicinal Plant Research, 5: 207.
Antiviral IC50=62.5 ug/ml	
Anxiolytic	
CNS-Active	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart.</i> 393 pp.
COX-2-Inhibitor IC32=100 uM	
Calcium-Antagonist IC50=1.2 uM rbt	
Cancer-Preventive	Stitt, P. A. <i>Why George Should Eat Broccoli.</i> Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Carcinogenic 2% (diet)	
Chemopreventive	
Cholagogue	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart.</i> 393 pp.
Choleretic	Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Clastogenic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Co-carcinogenic	
Collagen-Sparing	
Cytoprotective	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals.</i> The Pharmaceutical Press, London. 296pp.
Cytotoxic TC50=200 ug/ml	
DNA-Active	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
DNA-Protective	
Diuretic	Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart.</i> 393 pp.
Fungicide MIC=0.4 mg/ml	
Hepatocarcinogenic 400 ppm diet orl mus (in the absence of alcohol)	
Hepatoprotective	Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 210.
Hepatotropic	
Histamine-Inhibitor	
Immunostimulant	
Insectifuge	Tunon, H., Thorsell, W., and Bohlin, L. 1993. Mosquito Repelling Activity of Compounds Occurring in Achillea millefolium L. (Asteraceae). <i>Economic Botany</i> 48(2): 111-120, 1994.
Leukotriene-Inhibitor	
Lipoxygenase-Inhibitor IC27=5 mM	Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. <i>J. Agric. Food Chem.</i> 38: 688-690.
Lipoxygenase-Inhibitor IC50=62-148 uM	
Lyase-Inhibitor IC50=94-164 uM	
Metal-Chelator	McEvily, A.J., Iyengar, R., and Gross, A.T. Inhibition of Polyphenol Oxidase by Phenolic Compounds. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.25.
Ornithine-Decarboxylase-Inhibitor	Hagerman, A.E. <i>Tannin-Protein Interactions. Phenolic Compounds in Food and Their Effects on Health</i> , Ch.19.
Pesticide	
Prooxidant	
Prostaglandigenic	
Sedative 500 mg	
Sunscreen IC50=2.5 mg/l	Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. <i>Fitoterapia</i> 64(2): 134-136, 1993.
Sunscreen IC91=5 mg/l	Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. <i>Fitoterapia</i> 64(2): 134-136, 1993.
Sunscreen IC98=25 mg/l	Lazarova*, G., Kostova, I., Neychev, H. 1992. Photodynamic damage prevention by some hydroxycoumarins. <i>Fitoterapia</i> 64(2): 134-136, 1993.
Tumorigenic	Jim Duke's personal files.
Vulnerary	
Xanthine-Oxidase-Inhibitor IC50=39.21 uM	Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy.</i> Churchill Livingston, Edinburgh.

**Activities (28)**

AntiPMS 1 g/day					
Antiallergic 500 mg/day					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antianxiety					
Antiarrhythmic 500-1,500 mg					
Antiarthritic 1,000 mg/day					
Antiatherosclerotic 500 mg/day					
Anticlimacteric 1,000-1,500 mg/day					
Antidepressant					
Antidote (Aluminum)					
Antidote (Lead)					
Antihyperkinetic					
Antihypertensive					
Antiinsomniac					
Antimenopausal 1,000-1,500 mg/day					
Antiobesity					
Antiosteoporotic 500-2,000 mg/day					
Antiperiodontitic 750 mg/day					
Antirheumatic 1,000 mg/day					
Antistress 500-1,500 mg/day					
Antitic					
Anxiolytic 500-1,500 mg/day					
Calcium-Channel-Blocker					
Diuretic					
Hypocholesterolemic 500 mg/day					
Hypotensive 1 g/day					
Laxative 1,000-1,200 mg					
Tranquilizer 500-1,500 mg/day					
Vasodilator					

## CAMPESTEROL

Root -- 200.0 1.28 Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)

**Activities (2)**

Antioxidant IC37=10 uM					
Hypocholesterolemic					Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

## CARBOHYDRATES

Root 155000.0 783000.0 -0.6 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

## CHLORINE

Root 185.0 745.0 0.36 Wealth of India.

**Activities (7)**

Antibacterial	Martindale's 29th
Antiherpetic	Martindale's 29th
Antiseptic	Martindale's 29th
Antiviral	Martindale's 29th
Candidicide	Martindale's 29th
Fungicide	Martindale's 29th
Pesticide	Martindale's 29th

## CHROMIUM

Root 0.6 3.5 0.14 \*

**Activities (24)**

Amphiglycemic?	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
AntiAGE 200-1,000 ug	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
AntiCFS 200 ug	
Antiacne	
Antiaging 200-1,000 ug	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antiatherosclerotic 20 ug/day	
Anticorneotic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidiabetic 200-1,000 ug	
Antidote (Lead)	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antifatigue 200 ug	
Antiglycosuric 200-1,000 ug	
Antiobesity 200-1,000 ug	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antisyndrome-X 200-800 ug	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antitriglyceride 20 ug/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antitriglyceride 200-1,000 ug	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Cardioprotective	
Energizer	
Hypocholesterolemic 20 ug/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Hypocholesterolemic 200-1,000 ug	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Hypoglycemic 200-1,000 ug	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Hypotensive 200-1,000 ug	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Immunomodulator	
Insulinogenic	
Memorigenic	

**COBALT**

Root -- -- \*

**Activities (2)**

Cardiomyopathicogenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Erythrocytogenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

**COPPER**

Root 1.0 9.0 -0.3 \*

**Activities (12)**

Antianemic	
Antiarthritic	
Antidiabetic 2-4 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antifatigue	
Antiinflammatory	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antinociceptive	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antosteoporotic	
Cardioprotective	
Contraceptive	Martindale's 28th
Hypocholesterolemic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Immunomodulator	
Schizophrenogenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

**D-2-BUTYLISOTHIOCYANATE**

Seed -- -- \*

**EO**

Root 500.0 2160.0 -0.55 \*

**EO**

Plant 200.0 3050.0 -0.51 List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

**ETHYL-ISOTHIOCYANATE**

Root -- -- Wealth of India.

**Activities (1)**

Antiasthmatic	Eur J Pharmacol
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FAT	Root	5040.0	28000.0	0.17	*
FIBER	Root	14000.0	94000.0	0.13	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<b>Activities (15)</b>					
Angiotensin-Receptor-Blocker					
Antidiabetic					
Antihypertensive					
Antiobesity					
Antitumor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Antiulcer	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Beta-Blocker					
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				
Cardioprotective					
Diuretic					
Hypocholesterolemic					
Hypotensive 10 g/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Hypouricemic					
Laxative					
Vasodilator					
FIBER(CRUDE)	Root	--	122000.0	0.32	*
FIBER(DIETARY)	Root	--	430000.0	0.34	*
FLUORINE	Root	--	0.1	-0.81	ACTA AGRIC SCAND SUPPL 22: 1980
FRUCTOSE	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<b>Activities (8)</b>					
Antialcoholic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antidiabetic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antihangover					
Antiketotic	Merck 11th Edition				
Antinauseant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Laxative					
Neoplastic	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses				
Sweetener 2 x glucose	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
GENTISIC-ACID	Root	--	15.0		*
<b>Activities (8)</b>					
Analgesic	Merck 11th Edition				
Antibacterial	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antifeedant					
Antiinflammatory	Merck 11th Edition				
Antioxidant 1/3 BHA					
Antirheumatic	Grenand, P., Moretti, C., and Jacquemin, H. 1987. Pharmacopees Traditionnelles en Guyane. l'ORSTROM, Paris. 569 pp.				
Antiviral	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Pesticide					
GLUCOBERTEROIN	Plant	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
GLUCOBRASSICANAPIN	Plant	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<b>Activities (1)</b>					
Quinone-Reductase-Inducer 15 uM	Tawfig,N. Heaney,R.K.,Plumb,J.A.,Fenwick,G.R.,Musk,S.R.R.,Williamson,G.1995. Dietary Glucosinolates as Blocking Agents Against Carcinogenesis: Glucosinolate Breakdown Products Assessed Induction of Quinone Reductase Activity I.Carcinogenesis 16(5)119-1194				

GLUCOCAPPARIN	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
GLUCOCHEIROLIN	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
GLUCOCOCHLEARIN	Seed	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
GLUCOCONRINGIIN	Seed	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
GLUCOIBERIN	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<b>Activities (1)</b>				
Quinone-Reductase-Inducer 15 uM	Tawfig,N. Heaney,R.K.,Plumb,J.A.,Fenwick,G.R.,Musk,S.R.R.,Williamson,G.1995. Dietary Glucosinolates as Blocking Agents Against Carcinogenesis: Glucośinolate Breakdown Products Assessed Induction of Quinone Reductase Activity I.Carcinogenesis 16(5)119-1194			
GLUCOIBERVERIN	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
GLUCOLEPIDIN	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
GLUCONAPIN	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
<b>Activities (1)</b>				
Quinone-Reductase-Inducer	Tawfig,N. Heaney,R.K.,Plumb,J.A.,Fenwick,G.R.,Musk,S.R.R.,Williamson,G.1995. Dietary Glucosinolates as Blocking Agents Against Carcinogenesis: Glucośinolate Breakdown Products Assessed Induction of Quinone Reductase Activity I.Carcinogenesis 16(5)119-1194			
GLUCONASTURTIIN	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
GLUCOPUTRANJIVIN	Seed	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
GLUCOSE	Root	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<b>Activities (7)</b>				
Acetylcholinergic				
Antiedemic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.			
Antihepatotoxic	Merck 11th Edition			
Antiketotic	Merck 11th Edition			
Antivaricose	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.			
Hyperglycemic	Merck 11th Edition			
Memory-Enhancer	Science News, 138: 189, 1990.			
GLUCOSINOLATES	Root	--	--	*
GLUCOTROPAEOLIN	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
HAEMATIN	Root	13.0	16.0	Wealth of India.
HYDROXYCINNAMIC-ACID	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
INVERSTASE	Root	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
IRON	Root	1.4	8.0	-0.43
				*

**Activities (6)**

Antiakathisic	Martindale's 29th
Antianemic	Martindale's 29th
Anticanker	
Anticheilitic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antimennorrhaic 100 mg/day/wmn/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Prooxidant	

ISOPROPYLISOTHIOCYANATE	Plant	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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ISOTHIOCYANATES	Root	12200.0	20400.0	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
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KAEMPFEROL	Leaf	--	--	Abstract (See species file)
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**Activities (75)**

11B-HSD-Inhibitor	
5-Lipoxygenase-Inhibitor IC50 (uM)=20	
Aldose-Reductase-Inhibitor 100 uM	Oliveira, T. T., Nagem, T. J., Miranda, L. C. G., Paula, V. F., Teixeira, M. A. 1997. Inhibitory Action on Aldose Reductase by Soybean Flavonoids. <i>J Braz Chem Soc</i> , 8(3): 211-213.
Antiaflatoxin IC50=8.73 uM	
Antiaflatoxin IC50=3.28 ppm	
Antiaggregant 30 uM	
Antiallergic	
Antibacterial 20 ug/ml	
Anticancer	
Antifertility 250 mg/kg/day/60 days/orl rat	Kumar, P., Dixit*, V.P., and Khanna, P. Antifertility Studies of Kaempferol: Isolation and Identification from Tissue Culture of some Medicinally Important Plant Species. <i>Plantes medicinales et phytotherapie</i> , 23: 193-201, 1989.
Antigingivitic 20 ug/ml	
Antiherpetic 23-92 ug/ml	Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992.
Antihistaminic	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Antiimplantation	
Antiinflammatory 20 mg/kg	
Antiinflammatory 200 mg/kg ipr rat	
Antileukemic IC50=3.1 ug/ml	Life Sciences 55: 1061.
Antilymphocytic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antimutagenic ID50=10-40 nM	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Antioxidant IC50=40 uM	
Antioxidant 3/4 quercetin	
Antioxidant IC50=1.2 ug/ml	
Antiperiodontic 20 ug/ml	
Antiplaque 20 ug/ml	
Antiradicular 7 x quercetin	
Antiseptic 20 ug/ml	
Antiserotonin 200 mg/kg ipr rat	
Antispasmodic	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Antistaphylococcal	
Antitumor	
Antitumor-Promoter	Yasukawa, K., Takido, M., Takeuchi, M., Sato, Y., Nitta, K., and Nakagawa, S. 1989. Inhibitory Effects of Flavonol Glycosides on 12-O-Tetradecanoylphorbol-13-acetate-Induced Tumor Promotion. <i>Chem. Pharm. Bull.</i> 38(3): 774-776, 1990.
Antilcer 50-200 mg/kg ipr rat	
Antiviral 23-92 ug/ml	
Apoptotic 60 uM	
Aromatase-Inhibitor IC12=1 uM/l	Journal of Medicinal Food 2: 235.1999.
COX-2-Inhibitor	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

Carcinogenic	Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. Zulu Medicinal Plants. An inventory. University of Natal Press, Pietermaritzburg. 450 pp.
Choleretic	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Copper-Chelator	
Cyclooxygenase-Inhibitor IC50 (uM) =20	
Cytotoxic	
Diaphoretic?	Lawrence Review of Natural Products, Dec-90.
Diuretic	
Estrogenic EC50=0.1-25 uM/l	Journal of Medicinal Food 2: 227.1999.
Estrogenic EC50=0.56 uM	
Fungicide 20 ug/ml	Father Nature's Farmacy: The aggregate of all these three-letter citations.
HIV-RT-Inhibitor IC50=50-150 ug/ml	Garcia, J., Morin,* C., Nyasse, B., Sondengam, B-L., Tchouankeu, J-C., and Tsamo, E. Complete Structural Assignments Of An Ergosterol Derivative From Entandrophragma utile. Journal of Natural Products, 54(1): 136-142, 1991.
Hepatoprotective IC50=5.46 uM	
Hepatoprotective IC50=1.30 ppm	
Hypotensive	
ICAM-1-Inhibitor	
Inotropic	
Iodothyronine-Deliodinase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
JNK-Inhibitor	
Lipoxygenase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
MAO-Inhibitor	
Mutagenic	
NO-Inhibitor IC50=13.9 uM	
Natriuretic	
Neuroprotective	
PAF-Inhibitor	
Pesticide	
Protisticide	Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of <i>Helianthemum glomeratum</i> . Phytotherapy Research, 13(2): 102-105.
Quinone-Reductase-Inducer 3 uM	
TNF-alpha-Inhibitor IC50=3.99 uM	
Teratologic	
Topoisomerase-I-Inhibitor	Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. Toxicol Ind Health, 14: 223-237.
Topoisomerase-II-Inhibitor IC50=8.1 ug/ml	Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. J Natural Products, 58: 217-225.
Tyrosinase-Inhibitor ID50=230 uM	
Uterotrophic EC50=0.1-25 uM/l	Journal of Medicinal Food 2: 227.1999.
Vasodilator	
cAMP-Phosphodiesterase-Inhibitor	
iNOS-Inhibitor IC50=<15 uM	
iNOS-Inhibitor IC50=13.9 uM	

## KAEMPFEROL

Root -- 6.0 \*

### Activities (75)

11B-HSD-Inhibitor	
5-Lipoxygenase-Inhibitor IC50 (uM)=20	
Aldose-Reductase-Inhibitor 100 uM	Oliveira, T. T., Nagem, T. J., Miranda, L. C. G., Paula, V. F., Teixeira, M. A. 1997. Inhibitory Action on Aldose Reductase by Soybean Flavonoids. J Braz Chem Soc, 8(3): 211-213.
Antiaflatoxin IC50=8.73 uM	
Antiaflatoxin IC50=3.28 ppm	
Antiaggregant 30 uM	
Antiallergic	
Antibacterial 20 ug/ml	
Anticancer	
Antifertility 250 mg/kg/day/60 days/orl rat	Kumar, P., Dixit*, V.P., and Khanna, P. Antifertility Studies of Kaempferol: Isolation and Identification from Tissue Culture of some Medicinally Important Plant Species. Plantes medicinales et phytotherapie, 23: 193-201, 1989.
Antigingivitic 20 ug/ml	

Antiherpetic 23-92 ug/ml	Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992.
Antihistaminic	Williamson, E. M. and Evans, F. J. <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Antiimplantation	
Antiinflammatory 20 mg/kg	
Antiinflammatory 200 mg/kg ipr rat	
Antileukemic IC50=3.1 ug/ml	Life Sciences 55: 1061.
Antilymphocytic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Antimutagenic ID50=10-40 nM	Phenolic Compounds in Food and Their Effects on Health. <i>Antioxidants &amp; Cancer Prevention</i> . Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Antioxidant IC50=40 uM	
Antioxidant 3/4 quercetin	
Antioxidant IC50=1.2 ug/ml	
Antiperiodontic 20 ug/ml	
Antiplaque 20 ug/ml	
Antiradicular 7 x quercetin	
Antiseptic 20 ug/ml	
Antiserotonin 200 mg/kg ipr rat	
Antispasmodic	Williamson, E. M. and Evans, F. J. <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Antistaphylococcic	
Antitumor	
Antitumor-Promoter	Yasukawa, K., Takido, M., Takeuchi, M., Sato, Y., Nitta, K., and Nakagawa, S. 1989. Inhibitory Effects of Flavonol Glycosides on 12-O-Tetradecanoylphorbol-13-acetate-Induced Tumor Promotion. <i>Chem. Pharm. Bull.</i> 38(3): 774-776, 1990.
Antiulcer 50-200 mg/kg ipr rat	
Antiviral 23-92 ug/ml	
Apoptotic 60 uM	
Aromatase-Inhibitor IC12=1 uM/l	Journal of Medicinal Food 2: 235.1999.
COX-2-Inhibitor	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Carcinogenic	Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. <i>Zulu Medicinal Plants. An inventory</i> . University of Natal Press, Pietermaritzburg. 450 pp.
Choleretic	Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
Copper-Chelator	
Cyclooxygenase-Inhibitor IC50 (uM) =20	
Cytotoxic	
Diaphoretic?	Lawrence Review of Natural Products, Dec-90.
Diuretic	
Estrogenic EC50=0.1-25 uM/l	Journal of Medicinal Food 2: 227.1999.
Estrogenic EC50=0.56 uM	
Fungicide 20 ug/ml	Father Nature's Farmacy: The aggregate of all these three-letter citations.
HIV-RT-Inhibitor IC50=50-150 ug/ml	Garcia, J., Morin,* C., Nyasse, B., Sondengam, B-L, Tchouankeu, J-C., and Tsamo, E. Complete Structural Assignments Of An Ergosterol Derivative From Entandrophragma utile. <i>Journal of Natural Products</i> , 54(1): 136-142, 1991.
Hepatoprotective IC50=5.46 uM	
Hepatoprotective IC50=1.30 ppm	
Hypotensive	
ICAM-1-Inhibitor	
Inotropic	
Iodothyronine-Deiodinase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
JNK-Inhibitor	
Lipoxygenase-Inhibitor	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
MAO-Inhibitor	
Mutagenic	
NO-Inhibitor IC50=13.9 uM	
Natriuretic	
Neuroprotective	
PAF-Inhibitor	
Pesticide	
Protosticide	Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of <i>Helianthemum glomeratum</i> . <i>Phytotherapy Research</i> , 13(2): 102-105.

Quinone-Reductase-  
Inducer 3 uM

TNF-alpha-Inhibitor  
IC50=3.99 uM

Teratologic

Topoisomerase-I-  
Inhibitor Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. *Toxicol Ind Health*, 14: 223-237.

Topoisomerase-II-  
Inhibitor IC50=8.1 ug/ml Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. *J Natural Products*, 58: 217-225.

Tyrosinase-Inhibitor  
ID50=230 uM

Uterotrophic EC50=0.1-  
25 uM/l Journal of Medicinal Food 2: 227.1999.

Vasodilator

cAMP-  
Phosphodiesterase-  
Inhibitor

iNOS-Inhibitor IC50=/  
<15 uM

iNOS-Inhibitor  
IC50=13.9 uM

KAEMPFEROL-3-O-BETA-D- XYLOFURANOSIDE	Shoot	--	--	--	*
KAEMPFEROL-3-O-BETA-D- XYLOFURANOSYL(1,2)- GALACTOPYRANOSIDE	Shoot	--	--	--	*
KILOCALORIES	Seed	600.0	2370.0	-1.95	Wealth of India.
LEAD	Root	0.02	0.15	-0.66	ACTA AGRIC SCAND SUPPL 22: 1980
LIMONENE	Plant	--	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

**Activities (60)**

AChE-Inhibitor	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. &amp; Physiol.</i> , 23, 1985, 383-8.
Acaricide LC100=8 uM	
Allelochemical	
Allergenic 1/20th carene	
Antiacetylcholinesterase IC22-26=1.2 mM	
Antiadenomic	
Antialzheimeran?	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. &amp; Physiol.</i> , 23, 1985, 383-8.
Antiasthmatic	
Antibacterial	Revista Itiliana Eppos, 12: 5, 1994.
Anticancer	
Antiesophagitic	
Antifeedant	
Antiflu	Economic & Medicinal Plant Research, 5: 195.
Antiinflammatory	
Antilithic	
Antilymphomeric	
Antimetastatic (Stomach)	
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antiobesity	
Antiseptic	
Antispasmodic ED50=0.197 mg/ml	Fitoterapia No.59-1984.
Antitumor	
Antitumor (Breast)	
Antitumor (Colon)	
Antitumor (Pancreas)	
Antitumor (Prostate)	
Antitumor (Stomach)	
Antiviral	
Apoptotic	
Bronchoprotectant	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidistat	
Chemopreventive	
Cholesterolytic	
Detoxicant	
Enterococontractant	J. Aromatherapy 4: 22.
Expectorant	
Flavor	
Fungiphilic	J. Agric. Food Chem. 43: 2283.
Fungistat	
GST-Inducer	
Herbicide IC50=45 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Histaminic	
Immunomodulator	
Insecticide 0.37 uM/fly	
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Interleukin-6-Inhibitor	
Irritant	
Lipolytic	
Myorelaxant 50 mg/kg	
NO-Genic	
Nematicide IC=100 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Ornithine-Decarboxylase-Inhibitor ~750 mg/kg (diet)	
Ozone-Scavenger	
P450-Inducer	
Peristaltic	
Pesticide	
Photosensitizer	Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp.
Sedative ED=1-32 mg/kg	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Transdermal	

**Activities (65)**

AntiCFS

AntiLyme 400-1,000 mg

AntiMS

AntiPMS 400-800  
mg/day/wmn/orlAntiPMS 400-800  
mg/day/wmn orlAntiRaynaud's 280-350  
mg/day

Antiaggregant 400 mg/day

Antialcoholic

Antiangular 400 mg/day

Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.

Antianorectic

Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

Antianxiety 400 mg/day

Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.

Antiarrhythmic 400 mg/day

Antiarthritic

Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

Antiasthmatic

Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Antiatherosclerotic 400  
mg/day

Anticephalagic

Anticlimacteric 500-750  
mg/day

Anticonvulsant

Facciola, S. 1998. Cornucopia - A Source Book of Edible Plants. Kampong Publications, Vista CA. 713 pp.

Anticorony 400 mg/day

Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley &amp; Sons, New York. 272 pp. \$24.95

Antidepressant

Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

Antidiabetic 400-800  
mg/man/dayAntidysmenorrheic 100 mg 4  
x/day

Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.

Antiedometriotic 500  
mg/day

Antienterotic

Antiepileptic 450 mg/day

Antifatigue

Antifibromyalgic 200-300 mg  
3x/day

Antigastrotic

Antiglaucomic

Antihyperkinetic

Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

Antihypertensive

Antihypoglycemic

Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

Antiinflammatory 100 mg 4  
x/day

Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.

Antiinsomniac

Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

Antilithic

Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Antimastalgic

Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

Antimenopausal 500-750  
mg/dayAntimigraine 200  
mg/day/man

Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.

Antimital-valve-prolapse

Antinephrolytic

Antineurotic

Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

Antosteoporotic 500-1,000  
mg/day/wmn/orl

Antiplate 500-1,000 mg/day

Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley &amp; Sons, New York. 272 pp. \$24.95

Antispasmodic

Antispasmophilic 500 mg/day

Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.

Antistress 500-750 mg/day

Antistroke 400 mg/day

Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley &amp; Sons, New York. 272 pp. \$24.95

Antisynrome-X 400  
mg/man/day

Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley &amp; Sons, New York. 272 pp. \$24.95

Anxiolytic 500-750 mg/day

CNS-Depressant

Facciola, S. 1998. Cornucopia - A Source Book of Edible Plants. Kampong Publications, Vista CA. 713 pp.

Calcium-Antagonist

Cardioprotective	
Diuretic	
Hypocholesterolemic 400 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Hypotensive 260-500 mg/day	
Immunomodulator	
Insulinogenic 400 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Laxative 300-500 mg/day	
Litholytic	
Myorelaxant 100 mg 4 x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Neurotransmitter	
Tranquilizer 500-750 mg/day	
Uterorelaxant 100 mg 4 x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Vasodilator	

MANGANESE	Root	1.5	8.2	-0.45	*
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#### Activities (14)

AntiPMS	
Antialcoholic	Forest H. Nielsen, USDA, Grand Forks, various publications.
Antianemic	Martindale's 28th
Antiarthritic	
Antidiabetic 3-5 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antidiabetic 10-30 mg/man/day	
Antidiscotic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidyskinetic	Martindale's 28th
Antiepileptic 450 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiosteoporotic	
Antitotoc	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antioxidant	
Antisynrome-X 10-30 mg/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95
Hypoglycemic 10-30 mg/man/day	

MERCURY	Root	--	0.001	-0.51	ACTA AGRIC SCAND SUPPL 22: 1980
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#### Activities (1)

Nephrotoxic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
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METHYL-ISOTHIOCYANATE	Root	--	--	Wealth of India.
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MOLYBDENUM	Root	--	0.1	-0.46	ACTA AGRIC SCAND SUPPL 22: 1980
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#### Activities (2)

Anticancer (Esophagus)?	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antitumor (Esophagus)?	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.

MYROSIN	Root	--	--	ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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MYROSINASE	Root	--	--	*
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NIACIN	Root	16.0	90.0	1.15	*
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**Activities (39)**

Allergenic	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
AntiLyme 50 mg/day	
AntiMeniere's	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
AntiRaynaud's 1,500-4,000 mg/day	
Antiacrodynic	
Antiallergic 50 mg/2x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antialzheimeran	
Antiamblyopic	
Antianginal	
Anticataract	
Antichilblain	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Anticonvulsant 3 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antidementia	
Antidermatitic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidiabetic	
Antidysphagic	
Antiepileptic 3 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antihangover 50 mg	
Antihistaminic 50 mg 2x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antihyperactivity 1.5-6 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiinsomnic 1 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antineuralgic	
Antiparkinsonian 100 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antipellagric	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antiscotomic	
Antispasmodic 100 mg 2x/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antivertigo	
Cancer-Preventive	Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Cardioprotective	
Circulotonic	
Fibrinolytic	
Hepatoprotective	
Hepatotoxic	
Hypocholesterolemic 50-100 mg 3x/day	
Hypoglycemic	
Hypolipidemic	
Sedative	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Serotonergic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Vasodilator	Martindale's 29th

**NICKEL**

Root 0.2 1.2 -0.5 ACTA AGRIC SCAND SUPPL 22: 1980

**Activities (3)**

Antiadrenalinic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Anticirrhotic?	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Insulin-Sparing	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.

**NITROGEN**

Root 8600.0 38461.0 1.3 ACTA AGRIC SCAND SUPPL 22: 1980

**P-HYDROXY-BENZOIC-ACID**

Root -- 14.0 \*

**Activities (13)**

Antibacterial	
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antioxidant	Phenolic Compounds in Food and Their Effects on Health, 65.
Antiradicular	
Antisickling 10.5 ug/ml	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Fungistat EC50=607 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Immunosuppressant	
Pesticide	
Phytoalexin	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Prostaglandenic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Secretagogue	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Ubiquiot	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

## PECTIN

Root -- --

List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

**Activities (24)**

Antiatheromic 15 g/man/day	Cerda, J.J. Pectin in Health and Disease. HortScience, 25(12): 1485, 1990.
Antibacterial	
Antidiabetic 10 g/man/day/orl	
Antidiarrheic	Merck 11th Edition
Antienteric	
Antigallstone	
Antigastritic	
Antilithic	
Antimetastatic	
Antimutagenic	
Antiobesity	Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.
Antitumor (Colon)	
Antitumor (Prostate)	
Antitussive	
Antiulcer	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Chemopreventive	
Demulcent	
Fungicide	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Hemostat	
Hypocholesterolemic	
Hypoglycemic	Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.
Peristaltic	
Pesticide	

## PEROXIDASE

Root -- -- \*

## PEROXIDASES

Root 350.0 1400.0 \*

## PHENYLETHYL-ISOTHIOCYANATE

Root 292.0 540.0 Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

## PHENYLPROPYL-ISOTHIOCYANATE

Root -- -- Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

**Activities (1)**

Embryotoxic	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
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## PHOSPHATASE

Root -- -- List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

## PHOSPHORUS

Root 1278.0 7100.0 0.63 \*

**Activities (4)**

Antiosteoporotic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Anxiolytic	
Immunostimulant	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Osteogenic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
PHYTOSTEROLS	Root -- 910.0 0.01 Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. <i>CRC Handbook of Lipids in Human Nutrition</i> . CRC Press. Boca Raton, FL. 233 pp.)

**Activities (2)**

Antiprostatotic
Hypocholesterolemic

## POTASSIUM

Root 5400.0 30000.0 1.04 \*

**Activities (14)**

Angiotensin-Receptor-Blocker	
Antiarrhythmic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antidepressant	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antifatigue	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antihypertensive	
Antispasmodic	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.
Antistroke	
Anxiolytic	
Beta-Blocker	
Cardioprotective 3,000-5,000 mg	
Cardiotoxic 18,000 mg/man/day	
Diuretic	
Hypotensive	
Vasodilator	

## PROTEASE

Root -- -- List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

## PROTEIN

Leaf 21000.0 28000.0 -1.83 Wealth of India.

## PROTEIN

Root 45000.0 250000.0 1.48 \*

## QUERCETIN

Leaf -- -- Abstract (See species file)

**Activities (176)**

11B-HSD-Inhibitor	
5-Lipoxygenase-Inhibitor IC50 ( $\mu$ M)=4	
ATPase-Inhibitor	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp.
Aldehyde-Oxidase-Inhibitor IC70=96=10 $\mu$ M	
Aldose-Reductase-Inhibitor 100 $\mu$ M	
Aldose-Reductase-Inhibitor 4 ug/ml	Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. <i>Sankyo Kenkyusho Nempo</i> , 43: 99-110.
Aldose-Reductase-Inhibitor IC50=0.84 ug/ml cow	Okada,Y,et al.1995.Search for Naturally Occurring Substances to Prevent the Complications of Diabetes.II.Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation.Chem Pharm Bull43(8):1385-1387
Aldose-Reductase-Inhibitor IC50=0.344 $\mu$ M	Mao, X. M., Zhang, J. Q. 1993. Inhibition of Aldose Reductase by Extracts of Chinese Herbal Medicine. <i>Zhongguo Zhongyao Zazhi</i> , 18(10): 623-624.
Allelochemical IC82=1 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices &amp; Medicinal Plants: Recent Advances in Botany, Horticulture, &amp; Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp.
Allergenic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Analgesic	
AntiCrohn's 400 mg/man/3x/day	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
AntiGTF ID50=120 $\mu$ g/ml	
AntiHIV	
AntiPMS 500 mg/2x/day/wmn	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiaflatoxin IC50=25 $\mu$ M	
Antiaflatoxin IC50=7.5 ppm	
Antiaggregant IC50=55 $\mu$ M	Economic & Medicinal Plant Research, 5: 333.
Antiaggregant 30 $\mu$ M	

Antiaging	
Antiallergic IC50=14 uM	Jim Duke's personal files.
Antialzheimeran	
Antianaphylactic	Meli, R., Autore, G., Di Carlo, G., Capasso, F. Inhibitory Action of Quercetin on Intestinal Transit in Mice. <i>Phytotherapy Research</i> 4(5): 201, 1990.
Antiangiogenic	
Antiarthritic	
Antiasthmatic IC50=14 uM	
Antiatherosclerotic	
Antibacterial	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Anticarcinomic (Breast) IC50=1.5 uM	Medline (post 1990 searches filed in my computer)
Anticariogenic ID50=120 ug/ml	
Anticataract	
Anticolitic 400 mg/man/3x/day	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Anticomplementary	
Anticystitic 1,000 mg/day/4 weeks	
Antidepressant	
Antidermatitic	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antidiabetic	
Antielaastase IC50=0.8 ug/ml	Economic & Medicinal Plant Research, 5: 199.
Antiecephalitic	
Antiescherichic	
Antiestrogenic	
Antifeedant IC52=<1,000 ppm diet	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices &amp; Medicinal Plants: Recent Advances in Botany, Horticulture, &amp; Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp.
Antifibrosarcomic	
Antiflu	Vlietinck, A.J. and Dommisse, R.A. eds. 1985. <i>Advances in Medicinal Plant Research</i> . Wiss. Verlag. Stuttgart.
Antigastric	Rastitel'nye Resursy, 21: 85.
Antigonadotropic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
Antihepatotoxic	Joyeux, M., Rolland, A., Fleurentin, J., Mortier, F., and Dorfman, P. 1989. Tert-Butyl Hydroperoxide-Induced Injury in Isolated Rat Hepatocytes: A Model for Studying Anti-Hepatotoxic Crude Drugs. <i>Planta Medica</i> 56(2): 171-173, 1990.
Antiherptic 48-150 ug/ml	
Antihistaminic IC50=<10 uM	
Antihydrophobic	Vlietinck, A.J. and Dommisse, R.A. eds. 1985. <i>Advances in Medicinal Plant Research</i> . Wiss. Verlag. Stuttgart.
Antihypertensive	Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp.
Antiinflammatory 20-150 mg/kg	Fitoterapia No.5-1990.
Antileishmanic IC50=64	
Antileukemic IC50=10 uM	Economic & Medicinal Plant Research, 5: 225.
Antileukemic IC50=>10 ug/ml	Life Sciences 55: 1061.
Antileukemic 5.5-60 uM	
Antileukotriene	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antilipoperoxidant IC67=50	
Antimalarial IC50=1-6.4 ug/ml	Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987.
Antimelanomic	
Antimetastatic	
Antimutagenic ID50=2-5 nM	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Antimutagenic ID50=0.62 ug/ml	
Antimyocarditic	Economic & Medicinal Plant Research, 5: 199.
Antinitrosaminic	
Antinociceptive	
Antioxidant IC96=300 ppm	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Antioxidant ED50=2.3 uM	Seidel, V., Verholle, M., Malard, Y., Tillequin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. <i>Phytotherapy Research</i> , 14(2): 93-98.
Antioxidant 4.7 x Vit. E	
Antioxidant IC47=10 uM	
Antipancreatic	Joseph, J., Nadeau, D. and Underwood, A. 2001. <i>The Color Code</i> . Hyperion, NY.
Antiperiodontal	Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiperistaltic	
Antipermeability	
Antiperoxidant	<i>Planta Medica</i> , 57: A110, 1991.

Antipharyngitic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiplaque	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiplasmodial IC50=13-64	
Antipodriac	
Antipolio	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiproliferant 10 nM	
Antiprostanoid	
Antiprostatic	Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.
Antipsoriac	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiradicular IC50=4.6 uM	Planta Medica, 56(6): 695, 1990.
Antispasmodic	
Antistreptococcic ID50=120 ug/ml	
Antithiamin	Phenolic Compounds in Food and Their Effects on Health, 69.
Antithrombic	
Antitrypanosomic IC50=13	
Antitumor 10 uM	
Antitumor (Bladder)	
Antitumor (Breast)	
Antitumor (Colon)	
Antitumor (Lung)	
Antitumor (Ovary)	
Antitumor (Skin) 20 uM	
Antitumor-Promoter	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiulcer	
Antiviral IC50=10 uM	Economic & Medicinal Plant Research, 5: 225.
Antiviral 48-150 ug/ml	Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992.
Apoptotic 20-60 uM	
Bacteristat 10 mg/ml	
Bradycardiac	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
COMT-Inhibitor	
COX-2-Inhibitor <40 uM	
Calmodulin-Antagonist	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide	
Capillariprotective	Merck 11th Edition
Carcinogenic 40,000 ppm (diet) mus	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Catabolic	
Copper-Chelator	
Cyclooxygenase-Inhibitor	
Cytochrome-P450-1A2-Inhibitor	
Cytotoxic ED50=70 ug/ml	Matsukawa, Y., et al. The Effect of Quercetin and Other Flavonoids on Cell Cycle Progression and Growth of Human Gastric Cancer Cells. <i>Planta Medica</i> , 56(6): 677, 1990.
Cytotoxic IC82=100 ug/ml	Planta Medica, 57: A113, 1991.
Deiodinase-Inhibitor	Jim Duke's personal files.
Diaphoretic?	Lawrence Review of Natural Products, Dec-90.
Differentiator 5.5 uM	
Estrogenic 10% genistein	
Fungicide	
Glucosyl-Transferase-Inhibitor ID50=120 ug/ml	
HIV-RT-Inhibitor IC50=<1 ug/ml	Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. <i>Journal of Natural Products</i> , 53(5): 1234-1240, 1990.
Hemostat	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Hepatomagenic 5,000 ppm (diet) rat	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
Hepatoprotective	
Hypoglycemic 100 mg/kg orl'rat	Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. <i>Journal of Ethnopharmacology</i> , 27: 243-275, 1989.
Inotropic	
Insulinogenic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Juvabional	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.
Larvistat 8,000 ppm diet	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.
Lipoxygenase-Inhibitor IC11=1.25 mM	Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. <i>J. Agric. Food Chem.</i> 38: 688-690.

Lipoxygenase-Inhibitor	
IC50=0.1-5 uM	
MAO-A-Inhibitor	
MMP-9-Inhibitor 20 uM	
Mast-Cell-Stabilizer	
Metal-Chelator (Copper)	Seidel, V., Verholle, M., Malard, Y., Tillequin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. <i>Phytotherapy Research</i> , 14(2): 93-98.
Metalloproteinase-Inhibitor IC50=>42 uM	
Mutagenic	
NADH-Oxidase-Inhibitor	
NEP-Inhibitor IC50=>42 uM	
NF-kB-Inhibitor	
NO-Inhibitor IC>50=125 uM	
NO-Inhibitor IC50=20 uM	
NO-Synthase-Inhibitor 5-50 uM	
Neuroprotective 5-25 uM	
Ornithine-Decarboxylase-Inhibitor <10 uM	
P450-Inducer 5 uM	Father Nature's Farmacy: The aggregate of all these three-letter citations.
P450-Inhibitor 50-100 uM	Father Nature's Farmacy: The aggregate of all these three-letter citations.
PGE2-Inhibitor	
PTK-Inhibitor 0.4-24 uM	
Pesticide	
Phospholipase-Inhibitor	
Plasmodicide	Neuwinger, H. D. 1996. African Ethnobotany - Poisons and Drugs. Chapman & Hall, New York. 941 pp.
Proliferant	
Prostaglandin-Synthesis-Inhibitor 40 ug/ml	Ibewuike, J. C., Ogungbamila, F. O., Ogundaini, A. O., Okeke, I. N., Bohlin, L. 1997. Antiinflammatory and Antibacterial Activities of C-methylflavonol from <i>Piliostigma thonningii</i> . <i>Phytotherapy Research</i> , 11(4): 281-284.
Protein-Kinase-C-Inhibitor	Naim, M., Zehavi, U., Nagy, S., and Rouseff, R.L. Hydroxycinnamic Acids as Off-Flavor Precursors in Citrus Fruits and Their Effects on Health, Ch.14.
Quinone-Reductase-Inducer 6 uM	Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216.
Quinone-Reductase-Inducer 13 uM	
TNF-alpha-Inhibitor IC50=3.11 uM	
Teratologic	
Topoisomerase-I-Inhibitor IC50=12.8 ug/ml	
Topoisomerase-I-Inhibitor IC50=42 uM	
Topoisomerase-II-Inhibitor IC50=1-6.9 ug/ml	
Topoisomerase-II-Inhibitor IC50=23-40 uM	
Tumorigenic 0.1% diet orl rat/yr	Jim Duke's personal files.
Tyrosinase-Inhibitor ID50=70 uM	
Tyrosine-Kinase-Inhibitor	Economic & Medicinal Plant Research, 6: 170.
VEGF-Inhibitor	
Vasodilator	
Xanthine-Oxidase-Inhibitor IC50=>0.4 ug/ml	Chem. & Pharm. Bull. 38: 1772.
Xanthine-Oxidase-Inhibitor IC50=10.6 ug/ml	
Xanthine-Oxidase-Inhibitor 3.1 uM	
cAMP-Phosphodiesterase-Inhibitor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
iNOS-Inhibitor IC50=20 uM	

RAPHANIN

Plant -- --

List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

**Activities (3)**

Antibacterial  
Fungicide  
Pesticide

## RIBOFLAVIN

Root 4.0 20.0 3.49 \*

**Activities (15)**

AntiLyme 50 mg/day	
Antiarabiflavinotic 2-10 mg/day orl	Martindale's 28th
Anticarpal-Tunnel 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticataract 15 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticephalic	
Anticervicaldysplastic 1.6-10 mg/day	
Anticheilitic	
Antidecubitic	
Antiglossitic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antikeratitic	
Antimigraine	
Antioxidant	
Antipellagric	
Antiphotophobic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

## RUBIDIUM

Root 0.9 4.6 -1.15 ACTA AGRIC SCAND SUPPL 22: 1980

## RUTOSIDE

Leaf -- -- \*

**Activities (4)**

Antiaggregant  
Anticapillary-Fragility  
COMT-Inhibitor  
Choleretic 50 mg/kg ipr

## SALICYLATES

Root 1.0 2.0 -0.69 \*

**Activities (7)**

Antiaggregant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antiinflammatory	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antipyretic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antiuricosuric	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Hyperglycemic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Hypoglycemic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Uricosuric	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.

## SELENIUM

Root -- -- \*

**Activities (60)**

AP-1-Inhibitor 2-50 uM	
Analgesic 200 ug/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anorexic	Cooper-Driver, G. A., Chemical substances in plants toxic to animals, pp. 213-47 in Rechcigl, M., Jr., ed. CRC Handbook of Naturally Occurring Food Toxicants, CRC Press, Boca Raton, 1983, 339 pp.
AntiHIV	
AntiNF-kB	
Antiacne 200 ug/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiaggregant	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiangiogenic 2 uM	
Antiangiogenic 230 ug/kg orl rat	
Antiarthritic	
Antiasthmatic	
Antiatherosclerotic	
Anticataract 400 ug/day	

Anticirrhotic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anticlimacteric 200 ug/day	
Anticoronal 200 ug/day	
Antidandruff	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidepressant 200 ug/day	
Antidote (Mercury)	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antifibrotic 400 ug	
Antigout 200 ug	
Antikeshan	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antileukemic 1.6 mg/kg ipr mus	
Antileukotriene	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antimaculitic	
Antimelanomic 480 ug/kg	
Antimenopausal 200 ug/kg	
Antimetastatic 480 ug/kg	
Antimyalgic 200 ug/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiosteoarthritic	
Antioxidant 100-200 (-400) ug/man/day	
Antiparkinsonian 200-400 ug/day	
Antiproliferant 2 uM	
Antiradicular 100-200 (-400) ug/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antirheumatic	
Antisyndrome-X 100-200 (-400) ug/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antitumor 100-200 (-400) ug/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antitumor (Breast) 333.6 ug/day	
Antitumor (Breast) 0.8 mg/kg scu mus	
Antitumor (Breast) 150 ug/kg diet rat	
Antitumor (Breast) 230 ug/kg orl rat	
Antitumor (Lung) 240 ug/kg diet	
Antitumor (Prostate)	
Antitumor (brain) 38-150 ug/kg	
Antiulcerogenic	Rafatullah, S., Tariq, M., Al-Yahya, M.A., Mossa, J.S., and Ageel, A.M. 1989. Evaluation of Turmeric ( <i>Curcuma longa</i> ) for Gastric and Duodenal Antiulcer Activity in Rats. <i>J. of Ethnopharmacology</i> , 29: 25-34, 1990.
Anxiolytic	
Apoptotic	
Cancer-Preventive	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Cardioprotective 200 ug/day	
Depressant	Cooper-Driver, G. A., Chemical substances in plants toxic to animals, pp. 213-47 in Rechcigl, M., Jr., ed. CRC Handbook of Naturally Occurring Food Toxicants, CRC Press, Boca Raton, 1983, 339 pp.
Fungicide	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Immunomodulator	
Immunostimulant 100-200 (-400) ug/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
NF-kB-Inhibitor	
Ornithine-Decarboxylase-Inhibitor	
Pesticide	
Polyamine-Synthesis-Inhibitor	
Prostaglandin-Sparer	Fujita, T., Nakatani, E., Funaishi, N., Sakuma, S., Fujimoto, Y. Potent inhibition of prostaglandin inactivation in rabbit gastric antral mucosal slices by selenium ions in-vitro. <i>J. Pharm. Pharmacol.</i> 42: 655-657, 1990.
Protein-Kinase-C-Inhibitor IC50=2-50 uM	
VEGF-Inhibitor	

#### SILICON

Root 0.4 2.0 -0.33 \*

#### Activities (4)

Antiarteriosclerotic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antionychyotic	
Antiosteoporotic	
Cardioprotective	

#### SINAPIC-ACID

Plant -- -- \*

**Activities (9)**

Antibacterial	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antihepatotoxic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antioxidant IC27=30 ppm	
Antiperoxynitrite IC39=5 uM	
Antiperoxynitrite IC60=20 uM	
Antiperoxynitrite IC75=100 uM	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Fungicide	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Pesticide	

## SINAPIN

Seed -- -- List, P.H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

## SINIGRIN

Root -- 3000.0 \*

**Activities (7)**

Antifeedant	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Larvicide	
Mutagenic	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture.</i> Plenum Press, New York. 445 pp.
Pesticide	
Phagocytotic	Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Quinone-Reductase-Inducer 15 uM	Tawfig,N. Heaney,R.K.,Plumb,J.A.,Fenwick,G.R.,Musk,S.R.R.,Williamson,G.1995. Dietary Glucosinolates as Blocking Agents Against Carcinogenesis: Glucosinolate Breakdown Products Assessed Induction of Quinone Reductase Activity I.Carcinogenesis 16(5)119-1194

## SODIUM

Root 216.0 1200.0 0.05 \*

**Activities (1)**

Hypertensive	Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine.</i> Avon Books, New York. 509pp.
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## STARCH

Root 39600.0 220000.0 -0.4 \*

**Activities (5)**

Absorbent	Martindale's 29th
Antidote (Iodine)	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.
Antinesidioblastosic	Martindale's 29th
Emollient	Martindale's 29th
Poultice	Martindale's 29th

## STIGMASTEROL

Root -- -- -0.81 Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. *CRC Handbook of Lipids in Human Nutrition.* CRC Press. Boca Raton, FL. 233 pp.)

**Activities (12)**

Antihepatotoxic	
Antiinflammatory	Lawrence Review of Natural Products, 1995
Antinociceptive	
Antiophidic 2.3 mg ipr mus	Economic & Medicinal Plant Research, 5: 363.
Antioxidant IC33=10 uM	
Antiviral	Abid Ali Khan, M.M., Jain, D.C., Bhakuni, R.S., Zaim, M., and Thakur, R.S. 1991. Occurrence of some antiviral sterols in <i>Artemisia annua</i> . <i>Plant Science</i> , 75: 161-165, 1991.
Artemicide LC50=110 ppm	Jung, J.H., Pummangura, S., Chaichantipyuth, C., Patarapanich, C., and McLaughlin, J.L. 1989. Bioactive Constituents of <i>Melodorum fruticosum</i> . <i>Phytochemistry</i> . 29(5): 1667-1670. 1990.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Estrogenic	
Hypocholesterolemic	Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture.</i> Plenum Press, New York. 445 pp.
Ovulant	
Sedative	

## SUGAR

Root -- 73000.0 0.27 Wealth of India.

## SULFUR

Root 1800.0 10000.0 2.15 ACTA AGRIC SCAND SUPPL 22: 1980

#### Activities (14)

Acarifuge	
Antiacne	Martindale's 29th
Antiarthritic	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antidandruff	Martindale's 29th
Antigrey	Martindale's 29th
Antiosteoarthritic	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiseborheic	Martindale's 29th
Antiseptic	Martindale's 29th
Comedogenic	Martindale's 29th
Keratolytic	Martindale's 29th
Laxative	Martindale's 29th
Parasiticide	Martindale's 29th
Pesticide	
Scabicide	Martindale's 29th

#### TANNIN

Plant -- --

List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

#### Activities (35)

Anthelmintic	
AntiHIV	
Antibacterial	
Anticancer	
Anticariogenic	
Antidiarrheic	
Antidysenteric	
Antihepatotoxic	
Antihypertensive	
Antilipolytic	
Antimutagenic	
Antinephritic	Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990.
Antiophidic	Economic & Medicinal Plant Research, 5: 363.
Antioxidant	
IC50=1.44 ug/ml	
Antioxidant 1/3 quercetin	
Antiradicular 500 mg/kg/day orl mus	Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990.
Antiradicular 1/3 quercetin	
Antirenitic	Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990.
Antitumor	
Antitumor-Promoter	
Antiulcer	
Antiviral	
Cancer-Preventive	HerbalGram No. 22 - Spring 1990, page 14.
Carcinogenic	
Chelator	
Cyclooxygenase-Inhibitor	
Glucosyl-Transferase-Inhibitor	
Hepatoprotective	
Immunosuppressant	
Lipoxygenase-Inhibitor	
MAO-Inhibitor	
Ornithine-Decarboxylase-Inhibitor	
Pesticide	
Psychotropic	Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990.
Xanthine-Oxidase-Inhibitor	

#### THIAMIN

Root -- 3.0 -0.33

CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

### Activities (31)

Analgesic 1-4 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
AntiLyme 50 mg	
Antialcoholic 50-100 mg/day	
Antialzheimeran 100-3,000 mg/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antianorectic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, Londón. 791 pp.
Antibackache 1-4 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antiberiberi	
Anticancer	
Anticardiospasmic	
Anticataract	
Anticolitic	
Antidecubitic	
Antideliriant	
Antidementia	
Antidiarrheal	
Antifatigue	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, Londón. 791 pp.
Antigastritic	Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, Londón. 791 pp.
Antihangover 50 mg	
Antiheartburn	
Antiherpetic	
Antimigraine	
Antimycarditic	
Antineurapeutic 1-4 g/day	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antineurasthenic	
Antineuritic	
Antineuropathic 50 mg	Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.
Antipoliomyelic	
Insectifuge 75-150 mg/man/day	Martindale's 28th
Neuroprotective	
Pesticide	

### THIAMINE

Root 0.2 1.0 -0.67 \*

### TRIFOLIN

Shoot -- -- \*

### Activities (2)

Aldose-Reductase-Inhibitor  
IC19=1 uM

Aldose-Reductase-Inhibitor  
IC62=10 uM Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. *Phytochemistry*, 23: 1885-1888.

### UMECYANIN

Plant -- -- \*

### VANILLIC-ACID

Root -- 45.0 0.47 \*

## Activities (24)

Aldose-Reductase-Inhibitor	100 uM/l	
Allelopathic		
Anthelmintic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.	
Antibacterial 1.5-15 mg/ml	Recio, M. C., Rios, J. L., and Villar, A., A review of some antimicrobial compounds isolated from medicinal plants reported in the literature 1978-1988, Phytotherapy Research, 3(4), 1989, 117-125.	
Anticancer		
Antifatigue		
Antiinflammatory	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.	
Antileukemic IC50=25-56 ug/ml	Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. Am J Chin Med, 31(1):37-46.	
Antioxidant IC21=30 ppm		
Antioxidant 1/3 BHA		
Antiperoxidant IC15-65=100-200 ug/ml		
Antiradicular 7 x quercetin		
Antiseptic		
Antisickling	Planta Medica, 56(6): 681, 1990.	
Antitumor		
Antitumor-Promoter		
Ascaricide		
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.	
Choleretic		
Fungicide		
Immunosuppressant		
Laxative	=ICMR(Indian Council of Medical Research) 1976.Medicinal Plants of India Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi:600pp	
Pesticide		
Ubiquiot	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.	

WATER

Root -- 820000.0 0.33 \*

ZINC Root 0.5 2.9 -0.93 \*

## Activities (77)

ACE-Inhibitor	
Analgesic	
AntiBPH 25-60 mg/day	
AntiCrohn's	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
AntiHIV	
Antiacne 135 mg/day	
Antiacrodermatitic 8-34 mg/day/orl/chd	Martindale's 29th
Antialcoholic	
Antialopecic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antialzheimeran 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiangiogenic	
Antianorexic	Martindale's 29th
Antiarthritic 50 mg/3x/day/orl/man	
Anticanker 100 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticataract 30 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticoeliac	Martindale's 28th
Anticold 50 mg	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anticolitic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anticorony 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reverse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antidandruff	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidementia	
Antidiabetic 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reverse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antidote (Cadmium)	Let's Live, May 1989.
Antidysgeuzic	
Antieczemic 150 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiencephalopathic	Martindale's 29th
Antiepileptic 100 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antifibrotic 30 mg	

Antifuruncular 45 mg/3x/day/man	Martindale's 28th
Antihangover 15 mg	
Antiherpetic? 25-60 mg/day	
Antiimpotence	Martindale's 29th
Antiinfective 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiinfertility 60 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiinsomniac	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antileptic	Martindale's 29th
Antileukonychic	
Antilymphomtic	
Antimaculitic	
Antimetastatic	
Antineuropathic	
Antinyctalopic	
Antiobesity 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antosteoporotic	
Antiperiodontic	
Antiplaque	Martindale's 29th
Antiprolactin	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiprostatic 50 mg/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antirheumatic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antiseptic 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antispare-Tire 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antistomatitic 50 mg/man/3x/day	Martindale's 28th
Antisyndrome-X 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antitinnitin 60-120 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antitriglyceride 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antiulcer 50 mg/3x/day/man	Martindale's 28th
Antiulcer 88 mg/rat/day/15 days	
Antiviral?	Martindale's 29th
Astringent	Martindale's 28th
Collagenic	
Copper-Antagonist	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Deodorant	Martindale's 29th
Detoxicant (Alcohol)	
Ergogenic	
Hypotensive 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Immunomodulator	
Immunostimulant	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Immunosuppressant 300 mg/day/6 wks/orl/man	Martindale's 29th
Insulinogenic 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Leptogenic 30-60 mg/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Mucogenic	Li, K.M. Effect of zinc sulphate on acetic acid-induced gastric ulceration in rats. <i>J. Pharm. Pharmacol.</i> 42: 657-659, 1990.
NF-kB-Inhibitor	
Pesticide	
Spermigenic 60 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Testosteronogenic 60 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Trichomonicide	Martindale's 29th
Vulnerary	Martindale's 28th